FIG. 1, native human IL-13 (SEQ ID NO. 1)

G P V P P S T A L R E L I E E L V N I T Q N Q K
A P L C N G S M V W S I N L T A G M Y C A A L E
S L I N V S G C S A I E K T Q R M L S G F C P H
K V S A G Q F S S L H V R D T K I E V A Q F V K
D L L L H L K K L F R E G R F N *

FIG. 2, native murine IL-13 (SEQ ID NO. 2)

G P V P R S V S L P L T L K E L I E E L S N I T Q
D Q T P L C N G S M V W S V D L A A G G F C V A
L D S L T N I S N C N A I Y R T Q R I L H G L C
N R K A P T T V S S L P D T K I E V A H F I T K
L L S Y T K Q L F R H G P F *

FIG. 3, Alignment of several mammalian IL-13 sequences

```
                  *        20         *        40         *        60         *
HUMAN   :  GPVPP----STALRELIEELVNITQNQKAPLCNGSMVWSINLTAGM-YCAALESLINVSGCSAIEKTQRM
PIG     :  GPVPPH---STALKELIEELVNITQNQKTPLCNGSMVWSVNLTTSMQYCAALESLINISDCSAIQKTQRM
BOVIN   :  SPVPS----ATALKELIEELVNITQNQKVPLCNGSMVWSLNLTSSM-YCAALDSLISISNCSVIQRTKKM
DOG     :  SPVTP----SPTLKELIEELVNITQNQ-ASLCNGSMVWSVNLTAGM-YCAALESLINVSDCSAIQRTQRM
MOUSE   :  GPVPRSVSLPLTLKELIEELSNITQDQ-TPLCNGSMVWSVDLAAGG-FCVALDSLTNISNCNAIYRTQRI
RAT     :  GPVRRSTSPPVALRELIEELSNITQDQKTSLCNSSMVWSVDLTAGG-FCAALESLTNISSCNAIHRTQRI

                  80         *        100         *
HUMAN   :  LSGFCPHKVSAGQFSSLHVRDTKIEVAQFVKDLLLHLKKLFREGRFN    SEQ ID NO.1
PIG     :  LSALCSHKPPSEQVPGKHIRDTKIEVAQFVKDLLKHLRMIFRHG---    SEQ ID NO.3
BOVIN   :  LNALCPHKPSAKQVSSEYVRDTKIEVAQFLKDLLRHSRIVFRNERFN    SEQ ID NO.4
DOG     :  LKALCSQKPAAGQISSERSRDTKIEVIQLVKNLLTYVRGVYRHGNFR    SEQ ID NO.5
MOUSE   :  LHGLCNRKAP-TTVSS--LPDTKIEVAHFITKLLSYTKQLFRHGPF-    SEQ ID NO.2
RAT     :  LNGLCNQKAS-DVASS--PPDTKIEVAQFISKLLNYSKQLFRYGH--    SEQ ID NO.6
```

FIG. 4, IL-13 sequences from non-human primates

```
1     S P V P P S T A L K E L I E E L V N I T
1     S P V P R S T A L K E L I E E L V N I T
1     G P V P P Y T A L K E L I E E L V N I T

21    Q N Q K A P L C N G S M V W S I N L T A
21    Q N Q K A P L C N G S M V W S I N L T A
21    Q N Q K A P L C N G S M V W S I N M T A

41    G V Y C A A L E S L I N V S G C S A I E
41    G V Y C A A L E S L I N V S G C S A I E
41    G V Y C A A L E S L I N V S G C S A I E

61    K T Q R M L N G F C P H K V S A G Q F S
61    K T Q R M L N G F C P H K V S A G Q F S
61    K T Q R M L S G F C P H K V S A G Q F S

81    S L R V R D T K I E V A Q F V K D L L V
81    S L R V R D T K I E V A Q F V K D L L V
81    S L L V R D T K I E V A Q F V K D L L R

101   H L K K L F R E G Q F N .  cynomolgus IL13  SEQ ID NO.7
101   H L K K L F R E G R F N .    rhesus IL13     SEQ ID NO.8
101   H L R K L F H Q G T F N .   marmoset IL13   SEQ ID NO.9
```

FIG. 5, Immunogen 1 (SEQ ID NO. 10)

```
    GGCCCTGTGCCTCCCTCTAGCGCCCTCAAGGAGCTCATTGAGGAGCTGGCCAACATCACC
 1  ---------+---------+---------+---------+---------+---------+   60
    CCGGGACACGGAGGGAGATCGCGGGAGTTCCTCGAGTAACTCCTCGACCGGTTGTAGTGG
    G  P  V  P  P  S  S  A  L  K  E  L  I  E  E  L  A  N  I  T

    CAGAACCAGAAGGCTCCGCTCTGCAATGGCAGCATGGTATGGAGCATCAACCTGACAGCT
61  ---------+---------+---------+---------+---------+---------+  120
    GTCTTGGTCTTCCGAGGCGAGACGTTACCGTCGTACCATACCTCGTAGTTGGACTGTCGA
    Q  N  Q  K  A  P  L  C  N  G  S  M  V  W  S  I  N  L  T  A

    GGCATGTACTGTGCAGCCCTGGACTCCCTGATCAACGTGTCAGGCTGCAGTGCCATCGAG
121 ---------+---------+---------+---------+---------+---------+  180
    CCGTACATGACACGTCGGGACCTGAGGGACTAGTTGCACAGTCCGACGTCACGGTAGCTC
    G  M  Y  C  A  A  L  D  S  L  I  N  V  S  G  C  S  A  I  E

    CGGACCCAGAGGATCTTGAGCGCCTTCTGCCCGCACAAGGTCTCAGCTGGGCAGTTTTCC
181 ---------+---------+---------+---------+---------+---------+  240
    GCCTGGGTCTCCTAGAACTCGCGGAAGACGGGCGTGTTCCAGAGTCGACCCGTCAAAAGG
    R  T  Q  R  I  L  S  A  F  C  P  H  K  V  S  A  G  Q  F  S

    AGCTTGCGTGTCCGAGACACCAAAATCGAGGTGGCCCAGTTTGTAACGGACCTGCTCGTA
241 ---------+---------+---------+---------+---------+---------+  300
    TCGAACGCACAGGCTCTGTGGTTTTAGCTCCACCGGGTCAAACATTGCCTGGACGAGCAT
    S  L  R  V  R  D  T  K  I  E  V  A  Q  F  V  T  D  L  L  V

    CATTTAAAGAGACTTTTTCGCCAGGGAACGTTCAAC
301 ---------+---------+---------+------  336
    GTAAATTTCTCTGAAAAAGCGGTCCCTTGCAAGTTG
    H  L  K  R  L  F  R  Q  G  T  F  N
```

FIG. 6, Immunogen 2 (SEQ ID NO. 11)

G P V P P S T A L R E L I E E L V N I T
Q N Q K A P L C N G S M V W S I N L T A
G M Y C A A L E S L I N V S G C S A I E
K T Q R M L G G F C P H K F N N F T V S
F W L R V P K V S A S H L E D T K I E V
A Q F V K D L L L H L K K L F R E G R F
N

FIG. 7, Immunogen 3 (SEQ ID NO. 12)

F N N F T V S F W L R V P K V S A S H L
E G P V P P S T A L R E L I E E L V N I
T Q N Q K A P L C N G S M V W S I N L T
A G M Y C A A L E S L I N V S G C S A I
E K T Q R M L G G F C P H K V S A G Q F
S S L H V R D T K I E V A Q F V K D L L
L H L K K L F R E G R F N

FIG. 8, Immunogen 4 (SEQ ID NO. 13)

G P V P R S V S L P L T L K E L I E E L
S N I T Q D Q T P L C N G S M V W S V D
L A A G G F C V A L D S L T N I S N C N
A I Y R T Q R I L H G L C N R K F N N F
T V S F W L R V P K V S A S H L E D T K
I E V A H F I T K L L S Y T K Q L F R H G
P F

FIG. 9, Immunogen 5 (SEQ ID NO. 14)

F N N F T V S F W L R V P K V S A S H L
E G P V P R S V S L P L T L K E L I E E
L S N I T Q D Q T P L C N G S M V W S V
D L A A G G F C V A L D S L T N I S N C
N A I Y R T Q R I L H G L C N R K A P T
T V S S L P D T K I E V A H F I T K L L
S Y T K Q L F R H G P F

FIG. 10 Immunogen 6 (SEQ ID NO. 15)

F N N F T V S F W L R V P K V S A S H L
E G P V P R S V S L P V T L K E L I E E
L T N I T Q D Q T P L C N G S M V W S V
D L A A G G F C V A L D S L T N I S N C
N A I F R T Q R I L H A L C N R K A P T
T V S S L P D T K I E V A H F I T K L L
T Y T K N L F R R G P F

FIG 11, Immunogen 7 (SEQ ID NO. 16)

```
TACGTACATTCCGACGGCTCTTATCCAAAAGACAAGTTTGAGAAAATCAATGGCACTTGG
---------+---------+---------+---------+---------+---------+
Y  V  H  S  D  G  S  Y  P  K  D  K  F  E  K  I  N  G  T  W

TACTACTTTGACAGTTCAGGCTATATGCTTGCAGACCGCTGGAGGAAGCACACAGACGGC
---------+---------+---------+---------+---------+---------+
Y  Y  F  D  S  S  G  Y  M  L  A  D  R  W  R  K  H  T  D  G

AACTGGTACTGGTTCGACAACTCAGGCGAAATGGCTACAGGCTGGAAGAAAATCGCTGAT
---------+---------+---------+---------+---------+---------+
N  W  Y  W  F  D  N  S  G  E  M  A  T  G  W  K  K  I  A  D

AAGTGGTACTATTTCAACGAAGAAGGTGCCATGAAGACAGGCTGGGTCAAGTACAAGGAC
---------+---------+---------+---------+---------+---------+
K  W  Y  Y  F  N  E  E  G  A  M  K  T  G  W  V  K  Y  K  D

ACTTGGTACTACTTAGACGCTAAAGAAGGCGCCATGCAATACATCAAGGCTAACTCTAAG
---------+---------+---------+---------+---------+---------+
T  W  Y  Y  L  D  A  K  E  G  A  M  Q  Y  I  K  A  N  S  K

TTCATTGGTATCACTGAAGGCGTCATGGTATCAAATGCCTTTATCCAGTCAGCGGACGGA
---------+---------+---------+---------+---------+---------+
F  I  G  I  T  E  G  V  M  V  S  N  A  F  I  Q  S  A  D  G

ACAGGCTGGTACTACCTCAAACCAGACGGAACACTGGCAGACAGGCCAGAAGGCCCTGTG
---------+---------+---------+---------+---------+---------+
T  G  W  Y  Y  L  K  P  D  G  T  L  A  D  R  P  E  G  P  V

CCTCCCTCTAGCGCCCTCAAGGAGCTCATTGAGGAGCTGGCCAACATCACCCAGAACCAG
---------+---------+---------+---------+---------+---------+
P  P  S  S  A  L  K  E  L  I  E  E  L  A  N  I  T  Q  N  Q

AAGGCTCCGCTCTGCAATGGCAGCATGGTATGGAGCATCAACCTGACAGCTGGCATGTAC
---------+---------+---------+---------+---------+---------+
K  A  P  L  C  N  G  S  M  V  W  S  I  N  L  T  A  G  M  Y

TGTGCAGCCCTGGACTCCCTGATCAACGTGTCAGGCTGCAGTGCCATCGAGCGGACCCAG
---------+---------+---------+---------+---------+---------+
C  A  A  L  D  S  L  I  N  V  S  G  C  S  A  I  E  R  T  Q

AGGATCTTGAGCGCCTTCTGCCCGCACAAGGTCTCAGCTGGGCAGTTTTCCAGCTTGCGT
---------+---------+---------+---------+---------+---------+
R  I  L  S  A  F  C  P  H  K  V  S  A  G  Q  F  S  S  L  R

GTCCGAGACACCAAAATCGAGGTGGCCCAGTTTGTAACGGACCTGCTCGTACATTTAAAG
---------+---------+---------+---------+---------+---------+
V  R  D  T  K  I  E  V  A  Q  F  V  T  D  L  L  V  H  L  K

AGACTTTTTCGCCAGGGAACGTTCAAC
---------+---------+-------
R  L  F  R  Q  G  T  F  N
```

FIG. 12, Immunogen 8 (SEQ ID NO. 17)

```
TCCTCTCATTCTTCTAACATGGCGAACACCCAGATGAAGTCCGATAAAATCATCATCGCG
---------+---------+---------+---------+---------+---------+
S  S  H  S  S  N  M  A  N  T  Q  M  K  S  D  K  I  I  I  A

CACAGGGGAGCTAGCGGGTATCTGCCTGAGCACACCCTGGAGTCCAAGGCTCTGGCGTTC
---------+---------+---------+---------+---------+---------+
H  R  G  A  S  G  Y  L  P  E  H  T  L  E  S  K  A  L  A  F

GCCCAGCAGGCTGACTACCTGGAGCAGGACCTGGCGATGACAAAGGATGGCCGCCTCGTG
---------+---------+---------+---------+---------+---------+
A  Q  Q  A  D  Y  L  E  Q  D  L  A  M  T  K  D  G  R  L  V

GTGATCCATGACCATTTTCTCGACGGACTGACCGACGTCGCCAAGAAGTTCCCCCACCGC
---------+---------+---------+---------+---------+---------+
V  I  H  D  H  F  L  D  G  L  T  D  V  A  K  K  F  P  H  R

CATAGGAAGGACGGGAGGTATTACGTGATTGACTTCACCCTCAAGGAGATCCAGAGCCTG
---------+---------+---------+---------+---------+---------+
H  R  K  D  G  R  Y  Y  V  I  D  F  T  L  K  E  I  Q  S  L

GAGATGACCGAGAACTTCGAGACCGGCCCTGTGCCTCCCTCTAGCGCCCTCAAGGAGCTC
---------+---------+---------+---------+---------+---------+
E  M  T  E  N  F  E  T  G  P  V  P  P  S  S  A  L  K  E  L

ATTGAGGAGCTGGCCAACATCACCCAGAACCAGAAGGCTCCGCTCTGCAATGGCAGCATG
---------+---------+---------+---------+---------+---------+
I  E  E  L  A  N  I  T  Q  N  Q  K  A  P  L  C  N  G  S  M

GTATGGAGCATCAACCTGACAGCTGGCATGTACTGTGCAGCCCTGGACTCCCTGATCAAC
---------+---------+---------+---------+---------+---------+
V  W  S  I  N  L  T  A  G  M  Y  C  A  A  L  D  S  L  I  N

GTGTCAGGCTGCAGTGCCATCGAGCGGACCCAGAGGATCTTGAGCGCCTTCTGCCCGCAC
---------+---------+---------+---------+---------+---------+
V  S  G  C  S  A  I  E  R  T  Q  R  I  L  S  A  F  C  P  H

AAGGTCTCAGCTGGGCAGTTTTCCAGCTTGCGTGTCCGAGACACCAAAATCGAGGTGGCC
---------+---------+---------+---------+---------+---------+
K  V  S  A  G  Q  F  S  S  L  R  V  R  D  T  K  I  E  V  A

CAGTTTGTAACGGACCTGCTCGTACATTTAAAGAGACTTTTTCGCCAGGGAACGTTCAAC
---------+---------+---------+---------+---------+---------+
Q  F  V  T  D  L  L  V  H  L  K  R  L  F  R  Q  G  T  F  N
```

FIG. 13, Immunogen 9 (SEQ ID NO. 18)

```
TTTAATAATTTTACCGTTAGCTTTTGGTTGCGTGTTCCTAAAGTATCTGCTAGTCATTTA
---------+---------+---------+---------+---------+---------+
F  N  N  F  T  V  S  F  W  L  R  V  P  K  V  S  A  S  H  L

GAAGGCCCTGTGCCTCCCTCTAGCGCCCTCAAGGAGCTCATTGAGGAGCTGGCCAACATC
---------+---------+---------+---------+---------+---------+
E  G  P  V  P  P  S  S  A  L  K  E  L  I  E  E  L  A  N  I

ACCCAGAACCAGAAGGCTCCGCTCTGCAATGGCAGCATGGTATGGAGCATCAACCTGACA
---------+---------+---------+---------+---------+---------+
T  Q  N  Q  K  A  P  L  C  N  G  S  M  V  W  S  I  N  L  T

GCTGGCATGTACTGTGCAGCCCTGGACTCCCTGATCAACGTGTCAGGCTGCAGTGCCATC
---------+---------+---------+---------+---------+---------+
A  G  M  Y  C  A  A  L  D  S  L  I  N  V  S  G  C  S  A  I

GAGCGGACCCAGAGGATCTTGAGCGCCTTCTGCCCGCACAAGGTCTCAGCTGGGCAGTTT
---------+---------+---------+---------+---------+---------+
E  R  T  Q  R  I  L  S  A  F  C  P  H  K  V  S  A  G  Q  F

TCCAGCTTGCGTGTCCGAGACACCAAAATCGAGGTGGCCCAGTTTGTAACGGACCTGCTC
---------+---------+---------+---------+---------+---------+
S  S  L  R  V  R  D  T  K  I  E  V  A  Q  F  V  T  D  L  L

GTACATTTAAAGAGACTTTTTCGCCAGGGAACGTTCAAC
---------+---------+---------+---------
V  H  L  K  R  L  F  R  Q  G  T  F  N
```

FIG. 14, Immunogen 10 (SEQ ID NO. 19)

```
TTTAATAATTTTACCGTTAGCTTTTGGTTGCGTGTTCCTAAAGTATCTGCTAGTCATTTA
---------+---------+---------+---------+---------+---------+
F  N  N  F  T  V  S  F  W  L  R  V  P  K  V  S  A  S  H  L

GAAGGCCCTGTGCCTCCCTCTAGCGCCCTCAAGATTCTCATTGAGGAGCTGGCCAACATC
---------+---------+---------+---------+---------+---------+
E  G  P  V  P  P  S  S  A  L  K  I  L  I  E  E  L  A  N  I

ACCCAGAACCAGAAGGCTCCGCTCTGCAATGGCAGCATGGTATGGAGCATCAACCTGACA
---------+---------+---------+---------+---------+---------+
T  Q  N  Q  K  A  P  L  C  N  G  S  M  V  W  S  I  N  L  T

GCTGGCATGTACTGTGCAGCCCTGGACTCCCTGATCAACGTGTCAGGCTGCAGTGCCATC
---------+---------+---------+---------+---------+---------+
A  G  M  Y  C  A  A  L  D  S  L  I  N  V  S  G  C  S  A  I

GAGCGGACCCAGAGGATCTTGAGCGCCTTCTGCCCGCACAAGGTCTCAGCTGGGCAGTTT
---------+---------+---------+---------+---------+---------+
E  R  T  Q  R  I  L  S  A  F  C  P  H  K  V  S  A  G  Q  F

TCCAGCTTGCGTGTCCGAGACACCAAAATCGAGGTGGCCCAGTTTGTAACGGACCTGCTC
---------+---------+---------+---------+---------+---------+
S  S  L  R  V  R  D  T  K  I  E  V  A  Q  F  V  T  D  L  L

GTACATTTAAAGAGACTTTTTCGCCAGGGAACGTTCAAC
---------+---------+---------+---------
V  H  L  K  R  L  F  R  Q  G  T  F  N
```

FIG 15, Immunogen 11 (SEQ ID NO. 20)

G P V P P S S A L K E L I E E L A N I T
Q N Q K A P L C N G S M V W S I N L T A
G M Y C A A L D S L I N V S G C S A I E
R T Q R I L S A F C P H K V S A G Q F S
S L H V R D T K I E V A Q F V T D L L V
H L K R L F R Q G R F N

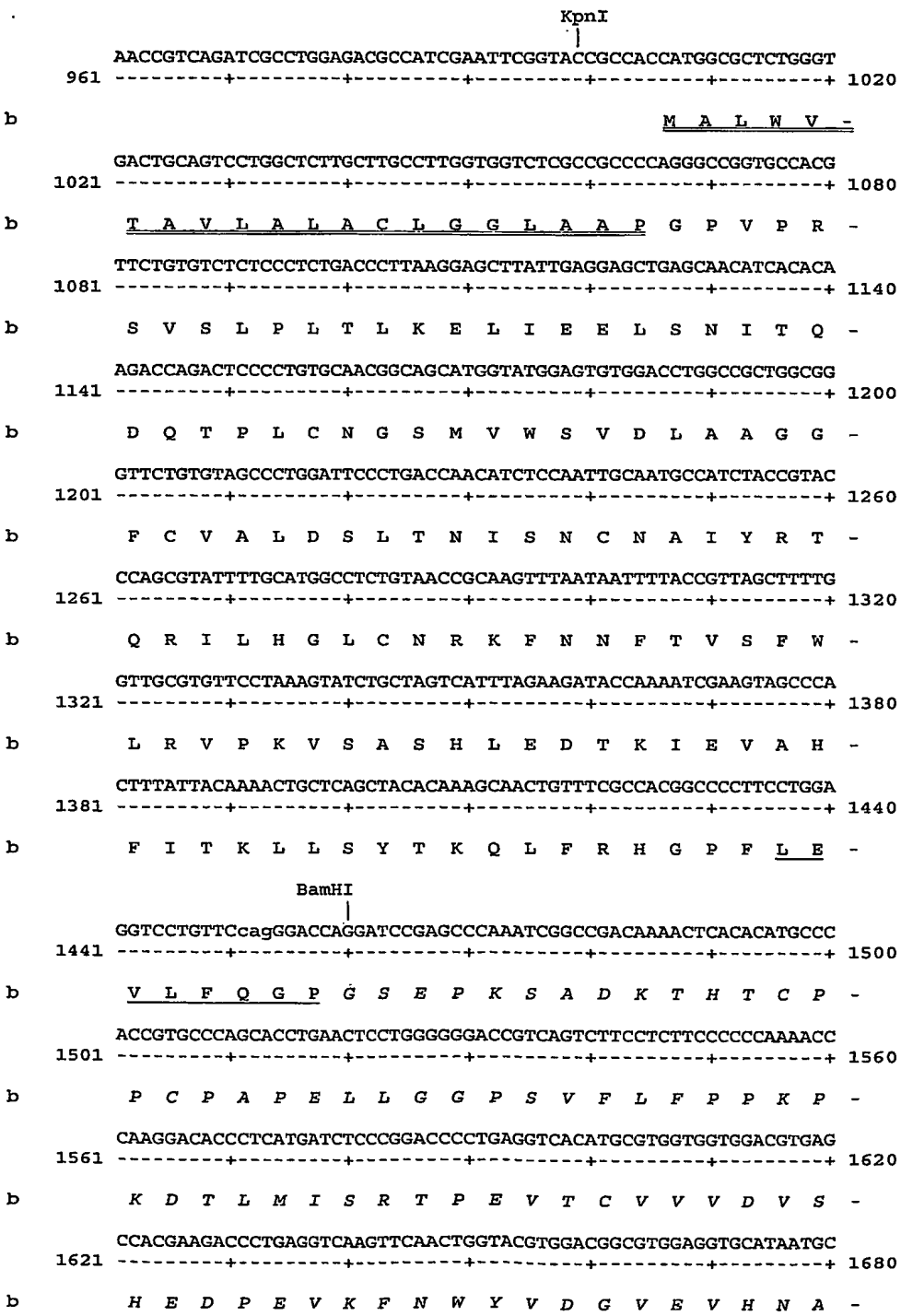
FIG. 16, Immunogen 12 (SEQ ID NO. 21)

G P V P P S T A L K E L I E E L V N I T
Q N Q K A P L C N G S M V W S I N L T A
G M Y C A A L D S L I N V S G C S A I E
R T Q R I L S A F C P H K V S A G Q F S
S L R V R D T K I E V A Q F V T D L L V
H L K K L F R Q G T F N

FIG. 17, Immunogen 13 (SEQ ID NO. 22)

G P V P P S S A L R E L I E E L A N I T Q N Q K A P L C N G
S M V W S I N L T A G M Y C A A L E S L I N V S G C S A I D
K T Q R M L S A F C P H K V S A G Q F S S L H V R D T K I E
V A Q F V K D L L V H L K R L F R D G R F N

FIG. 18, pCDNmIL13CDFC (SEQ ID NO. 23)



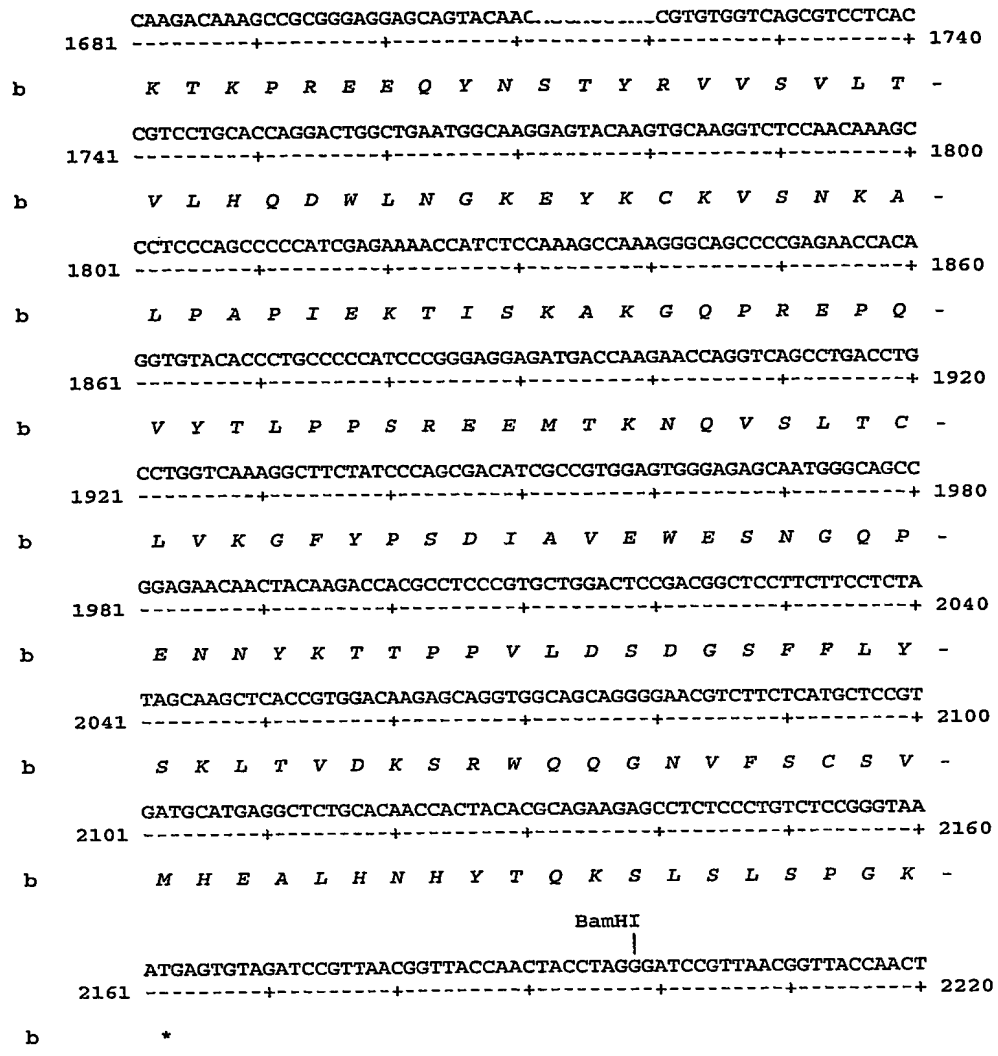
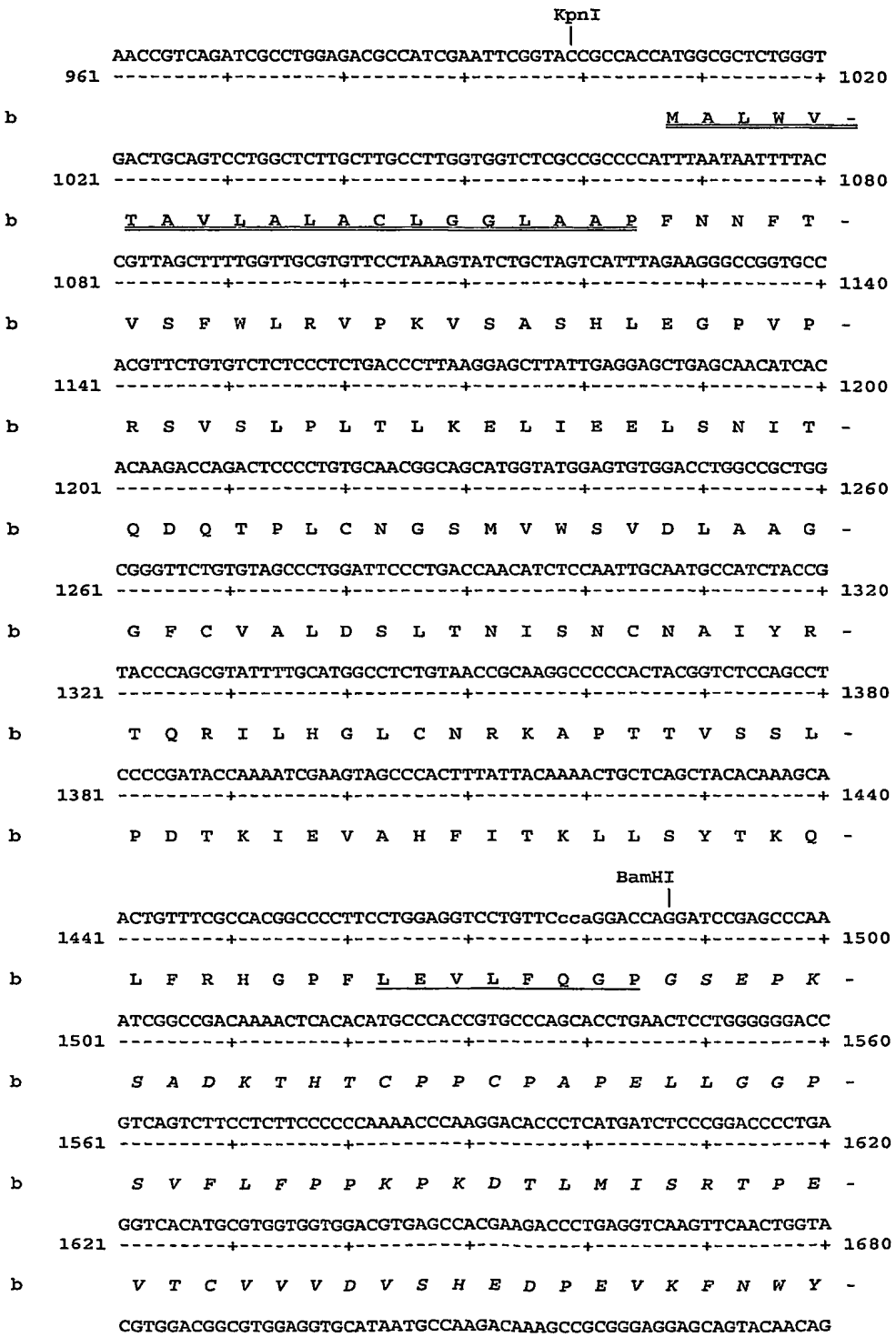
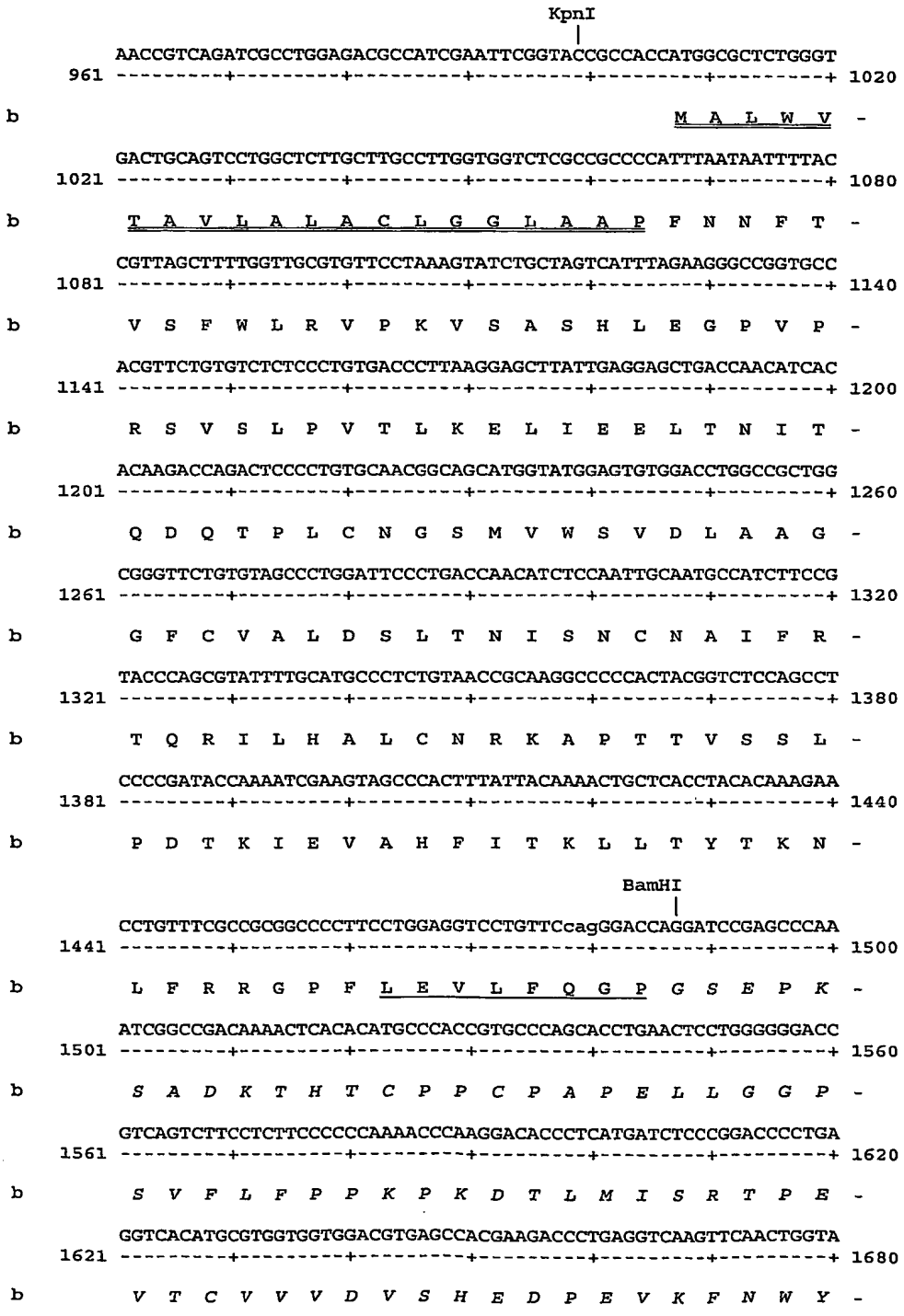

CAAGACAAAGCCGCGGGAGGAGCAGTACAAC..........CGTGTGGTCAGCGTCCTCAC
1681 ---------+---------+---------+---------+---------+---------+ 1740
b K T K P R E E Q Y N S T Y R V V S V L T -
CGTCCTGCACCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGC
1741 ---------+---------+---------+---------+---------+---------+ 1800
b V L H Q D W L N G K E Y K C K V S N K A -
CCTCCCAGCCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAGCCCCGAGAACCACA
1801 ---------+---------+---------+---------+---------+---------+ 1860
b L P A P I E K T I S K A K G Q P R E P Q -
GGTGTACACCCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTCAGCCTGACCTG
1861 ---------+---------+---------+---------+---------+---------+ 1920
b V Y T L P P S R E E M T K N Q V S L T C -
CCTGGTCAAAGGCTTCTATCCCAGCGACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCC
1921 ---------+---------+---------+---------+---------+---------+ 1980
b L V K G F Y P S D I A V E W E S N G Q P -
GGAGAACAACTACAAGACCACGCCTCCCGTGCTGGACTCCGACGGCTCCTTCTTCCTCTA
1981 ---------+---------+---------+---------+---------+---------+ 2040
b E N N Y K T T P P V L D S D G S F F L Y -
TAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGAACGTCTTCTCATGCTCCGT
2041 ---------+---------+---------+---------+---------+---------+ 2100
b S K L T V D K S R W Q Q G N V F S C S V -
GATGCATGAGGCTCTGCACAACCACTACACGCAGAAGAGCCTCTCCCTGTCTCCGGGTAA
2101 ---------+---------+---------+---------+---------+---------+ 2160
b M H E A L H N H Y T Q K S L S L S P G K -
BamHI
ATGAGTGTAGATCCGTTAACGGTTACCAACTACCTAGGGATCCGTTAACGGTTACCAACT
2161 ---------+---------+---------+---------+---------+---------+ 2220
b *

FIG. 19, pCDNmIL13p30FC (SEQ ID NO. 24)



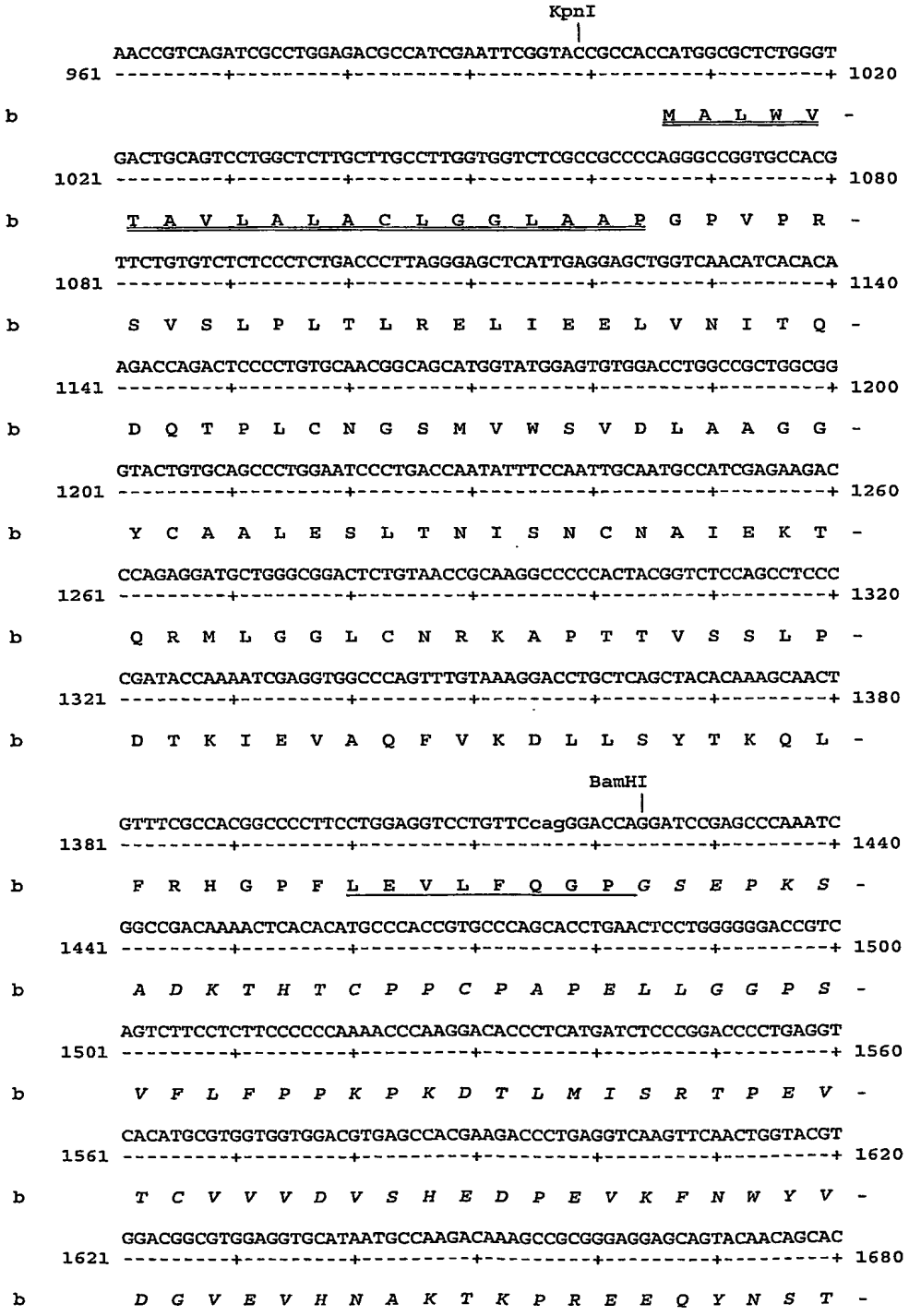
```
    1681 ---------+---------+---------+         +---------+---------+ 1740
b         V  D  G  V  E  V  H  N  A  K  T  K  P  R  E  E  Q  Y  N  S  -
     CACGTACCGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGCTGAATGGCAAGGA
    1741 ---------+---------+---------+---------+---------+---------+ 1800
b         T  Y  R  V  V  S  V  L  T  V  L  H  Q  D  W  L  N  G  K  E  -
     GTACAAGTGCAAGGTCTCCAACAAAGCCCTCCCAGCCCCCATCGAGAAAACCATCTCCAA
    1801 ---------+---------+---------+---------+---------+---------+ 1860
b         Y  K  C  K  V  S  N  K  A  L  P  A  P  I  E  K  T  I  S  K  -
     AGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGAGGAGAT
    1861 ---------+---------+---------+---------+---------+---------+ 1920
b         A  K  G  Q  P  R  E  P  Q  V  Y  T  L  P  P  S  R  E  E  M  -
     GACCAAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATCGC
    1921 ---------+---------+---------+---------+---------+---------+ 1980
b         T  K  N  Q  V  S  L  T  C  L  V  K  G  F  Y  P  S  D  I  A  -
     CGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGACCACGCCTCCCGTGCT
    1981 ---------+---------+---------+---------+---------+---------+ 2040
b         V  E  W  E  S  N  G  Q  P  E  N  N  Y  K  T  T  P  P  V  L  -
     GGACTCCGACGGCTCCTTCTTCCTCTATAGCAAGCTCACCGTGGACAAGAGCAGGTGGCA
    2041 ---------+---------+---------+---------+---------+---------+ 2100
b         D  S  D  G  S  F  F  L  Y  S  K  L  T  V  D  K  S  R  W  Q  -
     GCAGGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCA
    2101 ---------+---------+---------+---------+---------+---------+ 2160
b         Q  G  N  V  F  S  C  S  V  M  H  E  A  L  H  N  H  Y  T  Q  -
     GAAGAGCCTCTCCCTGTCTCCGGGTAAATGAGTGTAGATCCGTTAACGGTTACCAACTAC
    2161 ---------+---------+---------+---------+---------+---------+ 2220
b         K  S  L  S  L  S  P  G  K  *  -
```

FIG. 20, pCDNcIL13newFC (SEQ ID NO. 26)



```
       CGTGGACGGCGTGGAGGTGCATAATGCCAA          3CGGGAGGAGCAGTACAACAG
1681 ---------+---------+---------+---------+---------+---------+ 1740

b       V  D  G  V  E  V  H  N  A  K  T  K  P  R  E  E  Q  Y  N  S  -

       CACGTACCGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGCTGAATGGCAAGGA
1741 ---------+---------+---------+---------+---------+---------+ 1800

b       T  Y  R  V  V  S  V  L  T  V  L  H  Q  D  W  L  N  G  K  E  -

       GTACAAGTGCAAGGTCTCCAACAAAGCCCTCCCAGCCCCCATCGAGAAAACCATCTCCAA
1801 ---------+---------+---------+---------+---------+---------+ 1860

b       Y  K  C  K  V  S  N  K  A  L  P  A  P  I  E  K  T  I  S  K  -

       AGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGAGGAGAT
1861 ---------+---------+---------+---------+---------+---------+ 1920

b       A  K  G  Q  P  R  E  P  Q  V  Y  T  L  P  P  S  R  E  E  M  -

       GACCAAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATCGC
1921 ---------+---------+---------+---------+---------+---------+ 1980

b       T  K  N  Q  V  S  L  T  C  L  V  K  G  F  Y  P  S  D  I  A  -

       CGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGACCACGCCTCCCGTGCT
1981 ---------+---------+---------+---------+---------+---------+ 2040

b       V  E  W  E  S  N  G  Q  P  E  N  N  Y  K  T  T  P  P  V  L  -

       GGACTCCGACGGCTCCTTCTTCCTCTATAGCAAGCTCACCGTGGACAAGAGCAGGTGGCA
2041 ---------+---------+---------+---------+---------+---------+ 2100

b       D  S  D  G  S  F  F  L  Y  S  K  L  T  V  D  K  S  R  W  Q  -

       GCAGGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCA
2101 ---------+---------+---------+---------+---------+---------+ 2160

b       Q  G  N  V  F  S  C  S  V  M  H  E  A  L  H  N  H  Y  T  Q  -

       GAAGAGCCTCTCCCTGTCTCCGGGTAAATGAGTGTAGATCCGTTAACGGTTACCAACTAC
2161 ---------+---------+---------+---------+---------+---------+ 2220

b       K  S  L  S  L  S  P  G  K  *
```

FIG. 21, pCDNIL13oldFC (SEQ ID NO. 29)



```
     GTACCGTGTGGTCAGCGTCCTCACCGTCC?          ,CTGGCTGAATGGCAAGGAGTA
1681 ---------+---------+---------:          ·+---------+---------+ 1740

b     Y  R  V  V  S  V  L  T  V  L  H  Q  D  W  L  N  G  K  E  Y  -

     CAAGTGCAAGGTCTCCAACAAAGCCCTCCCAGCCCCCATCGAGAAAACCATCTCCAAAGC
1741 ---------+---------+---------+---------+---------+---------+ 1800

b     K  C  K  V  S  N  K  A  L  P  A  P  I  E  K  T  I  S  K  A  -

     CAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGAGGAGATGAC
1801 ---------+---------+---------+---------+---------+---------+ 1860

b     K  G  Q  P  R  E  P  Q  V  Y  T  L  P  P  S  R  E  E  M  T  -

     CAAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATCGCCGT
1861 ---------+---------+---------+---------+---------+---------+ 1920

b     K  N  Q  V  S  L  T  C  L  V  K  G  F  Y  P  S  D  I  A  V  -

     GGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGACCACGCCTCCCGTGCTGGA
1921 ---------+---------+---------+---------+---------+---------+ 1980

b     E  W  E  S  N  G  Q  P  E  N  N  Y  K  T  T  P  P  V  L  D  -

     CTCCGACGGCTCCTTCTTCCTCTATAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCA
1981 ---------+---------+---------+---------+---------+---------+ 2040

b     S  D  G  S  F  F  L  Y  S  K  L  T  V  D  K  S  R  W  Q  Q  -

     GGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAA
2041 ---------+---------+---------+---------+---------+---------+ 2100

b     G  N  V  F  S  C  S  V  M  H  E  A  L  H  N  H  Y  T  Q  K  -

     GAGCCTCTCCCTGTCTCCGGGTAAATGAGTGTAGATCCGTTAACGGTTACCAACTACCTA
2101 ---------+---------+---------+---------+---------+---------+ 2160

b     S  L  S  L  S  P  G  K  *                                    -
```

Figure 22,

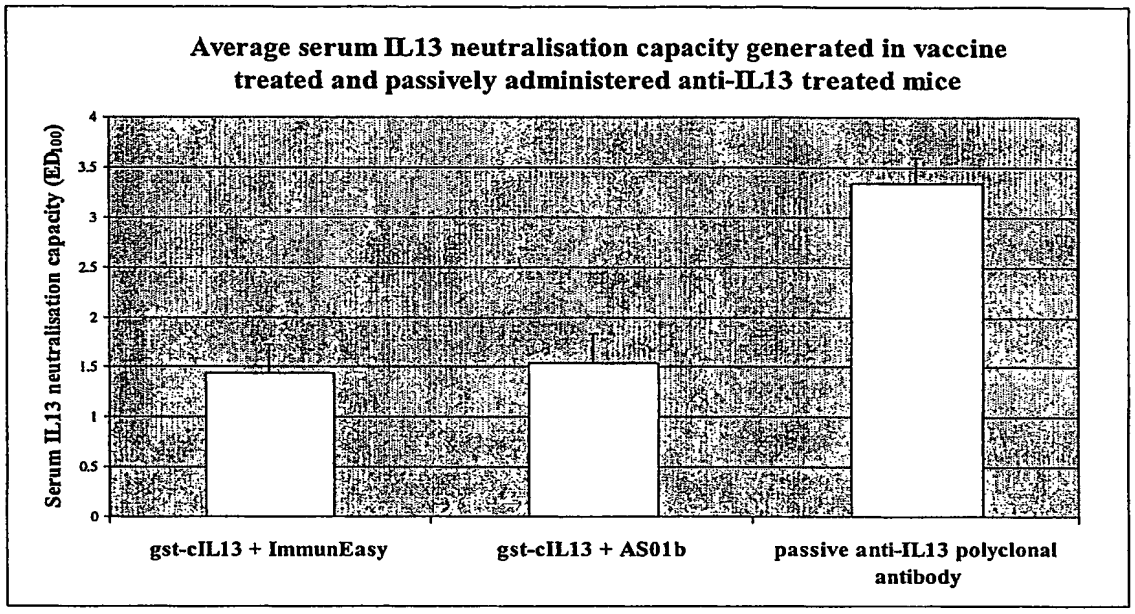


Figure 23,

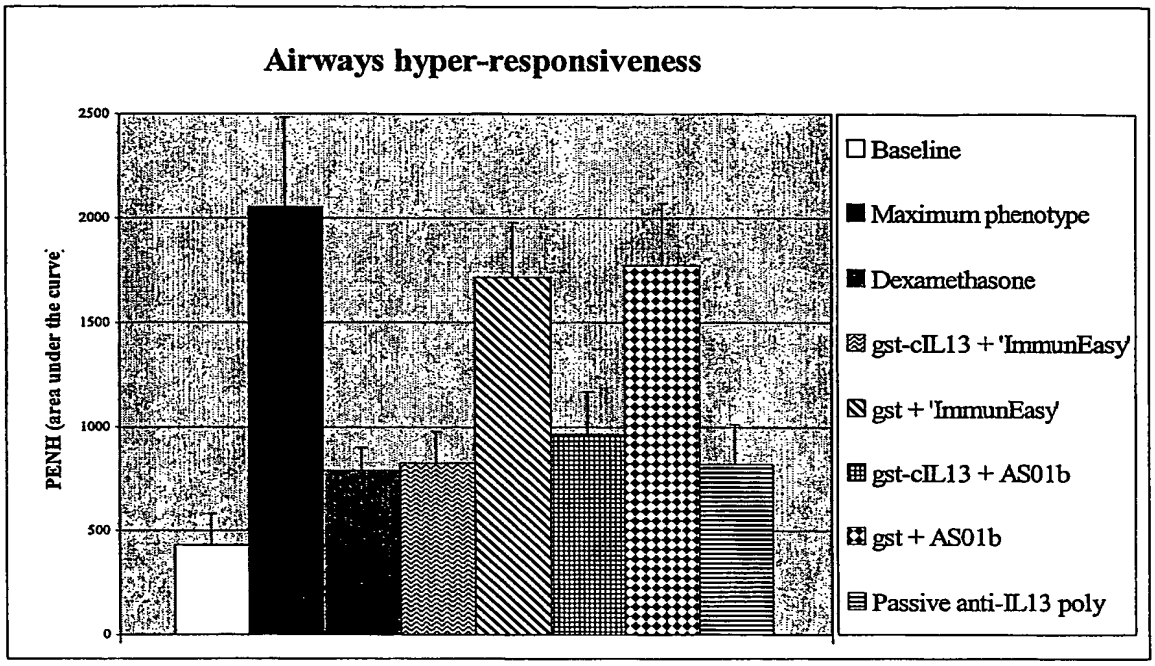


Figure 24,

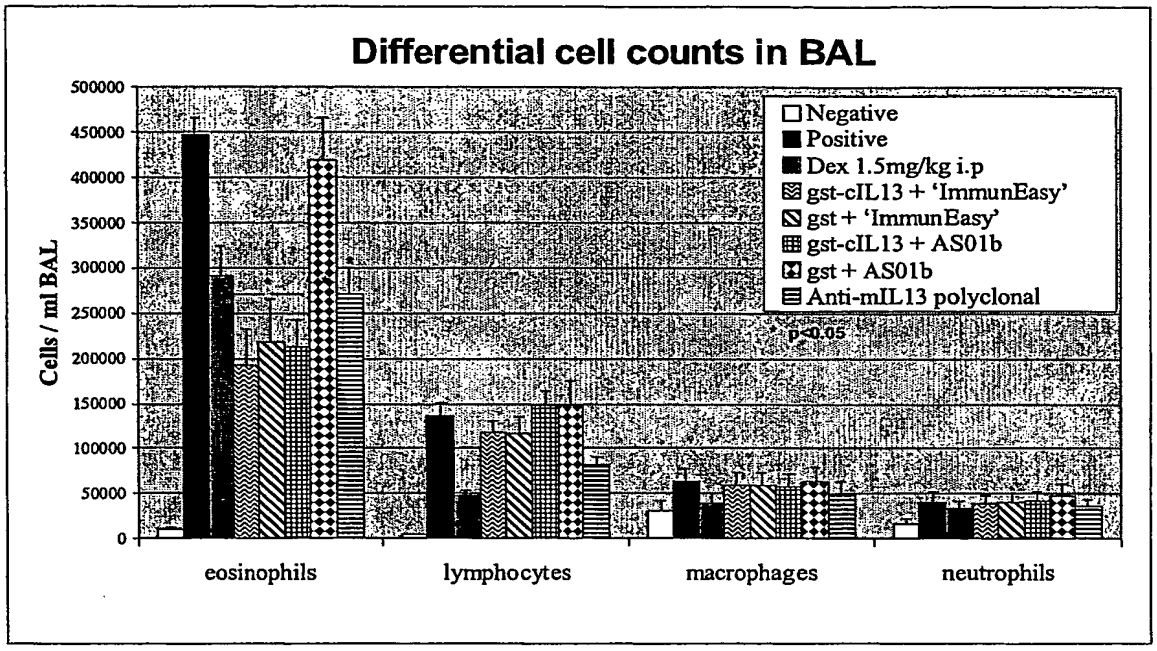


Figure 25,

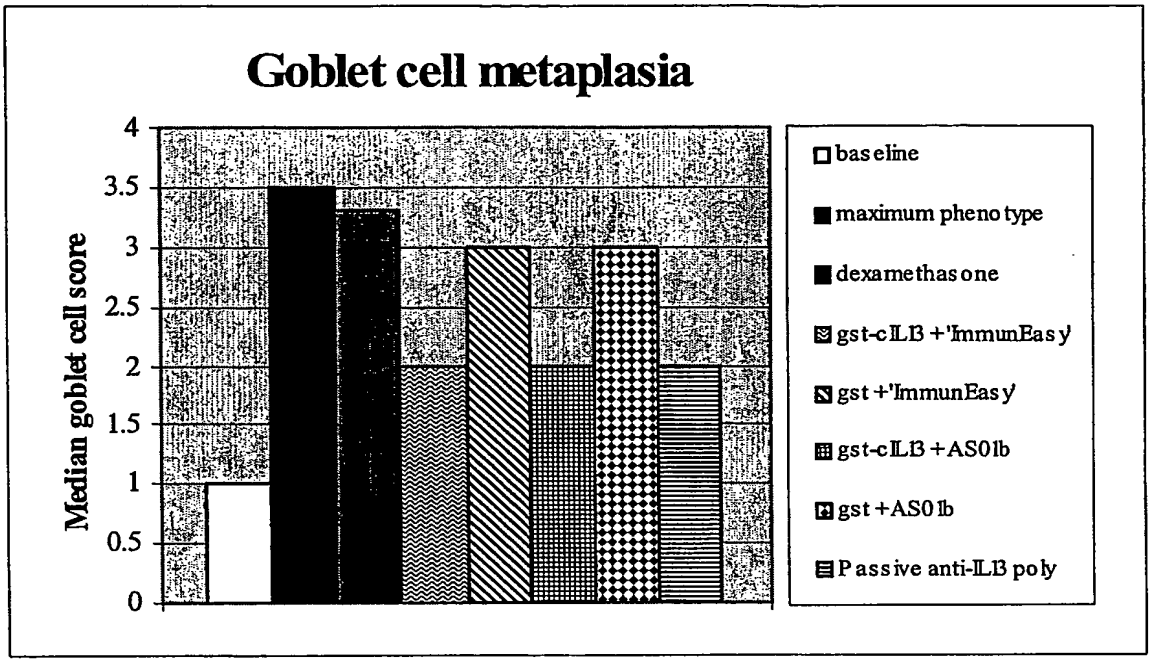


Figure 26A, gst-cIL13 + 'ImmunEasy'

Figure 26B, gst + 'ImmunEasy'

Figure 27A, gst-cIL13 + liposomes + 3D-MPL + QS21

Figure 27B, gst + liposomes + 3D-MPL + QS21

Figure 28, Dexamethasone

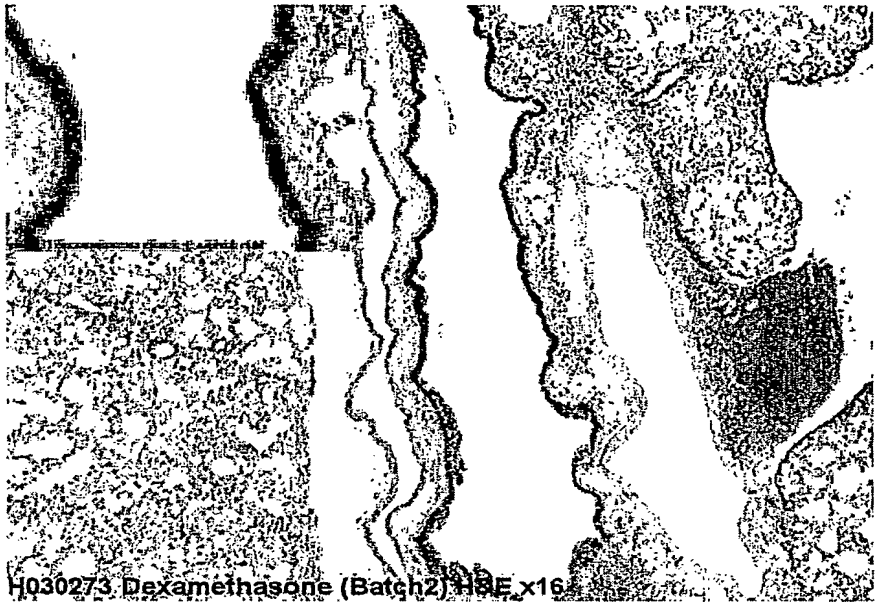


Figure 29, Maximal asthmatic phenotype

Figure 30,

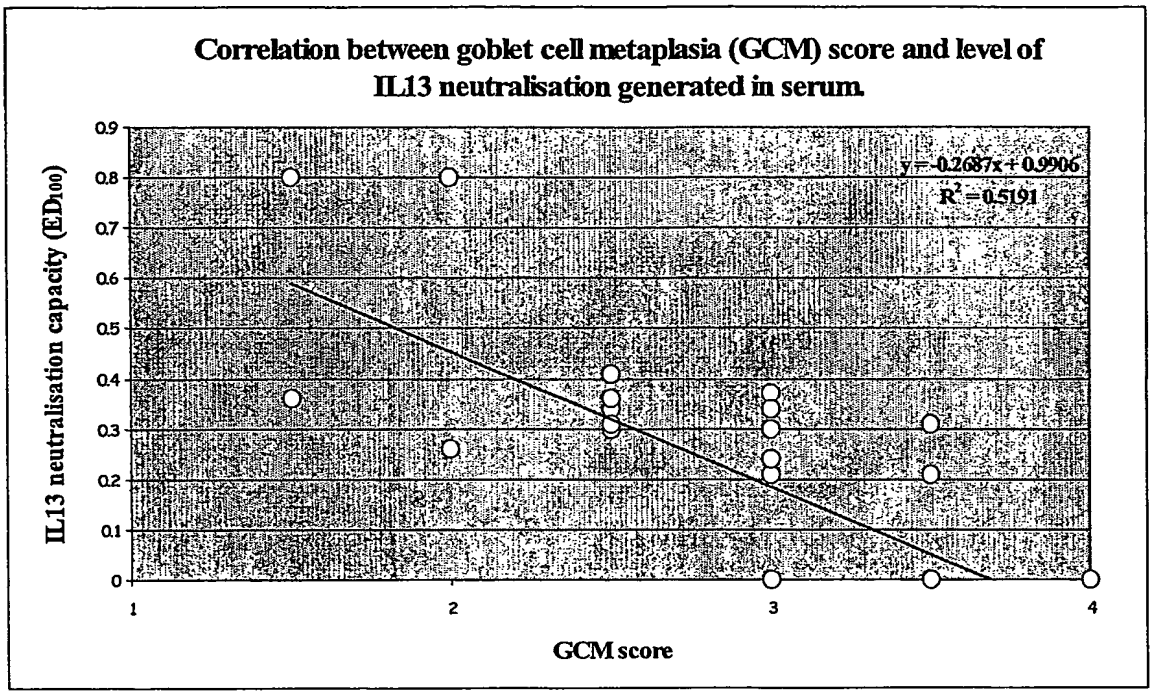


Figure 31

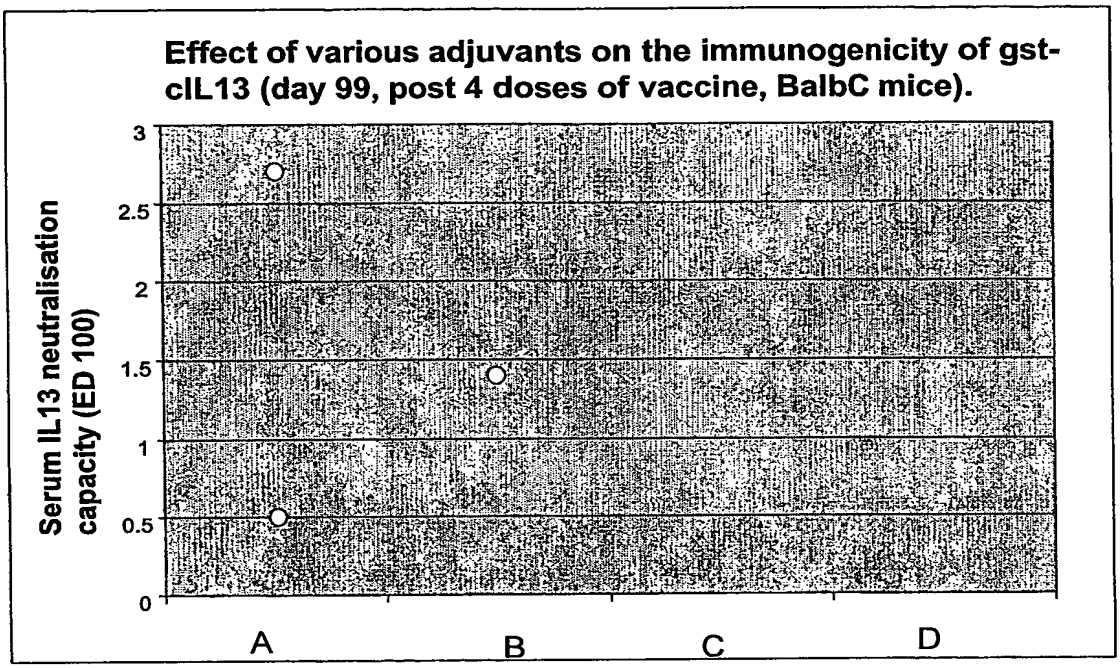


Figure 32,

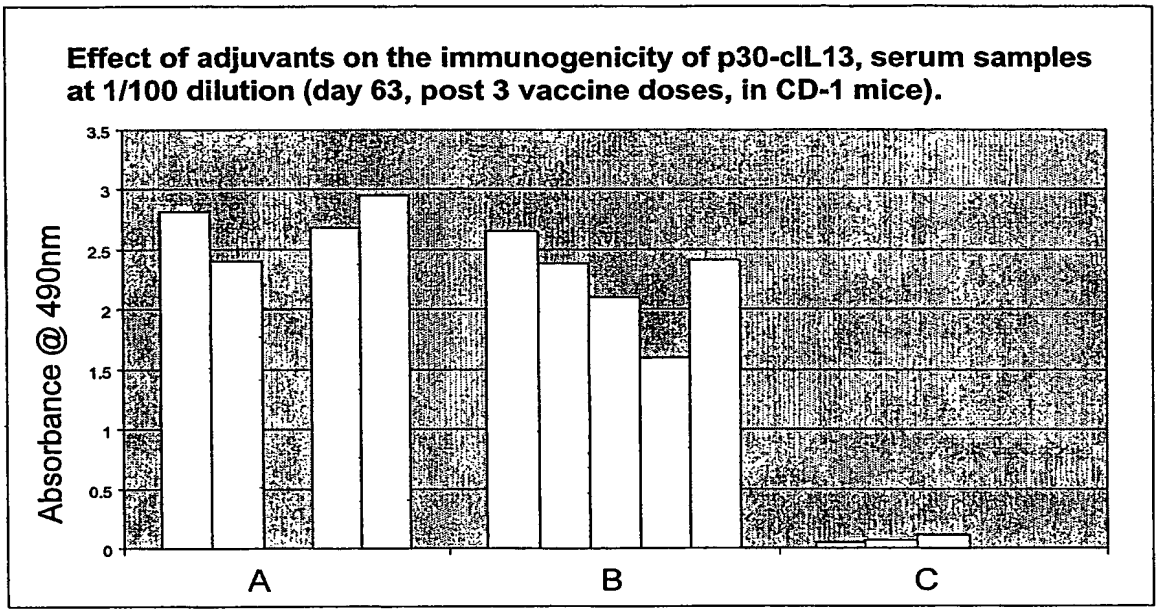


Figure 33,

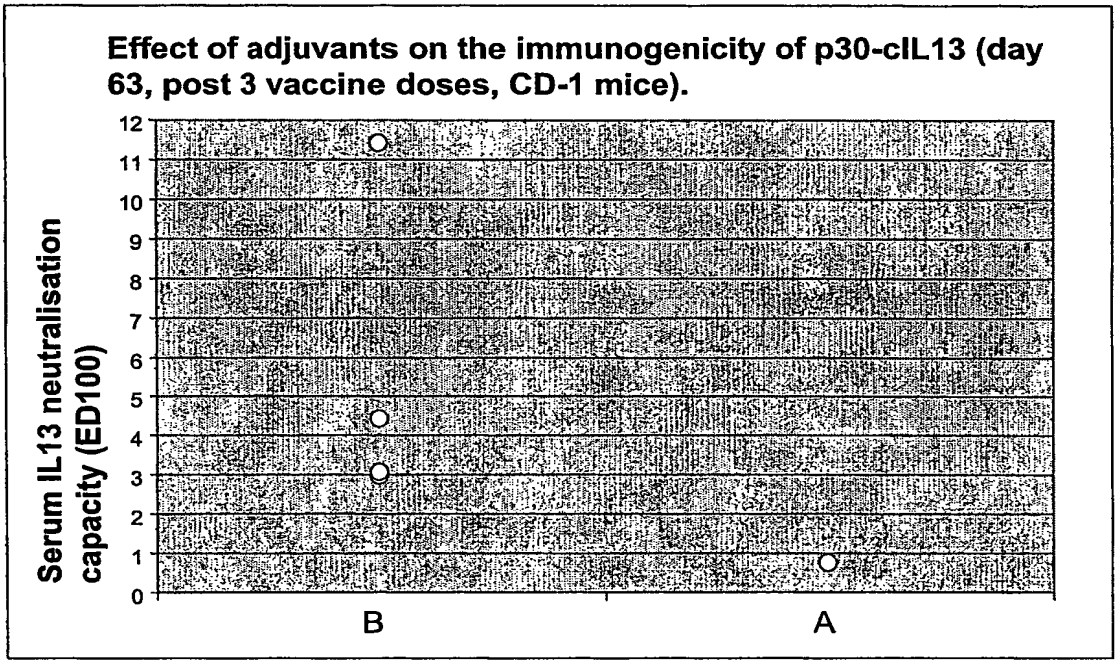

Effect of adjuvants on the immunogenicity of p30-clL13 (day 63, post 3 vaccine doses, CD-1 mice).
Serum IL13 neutralisation capacity (ED100)
12
11
10
9
8
7
6
5
4
3
2
1
0
B
A

Figure 34,

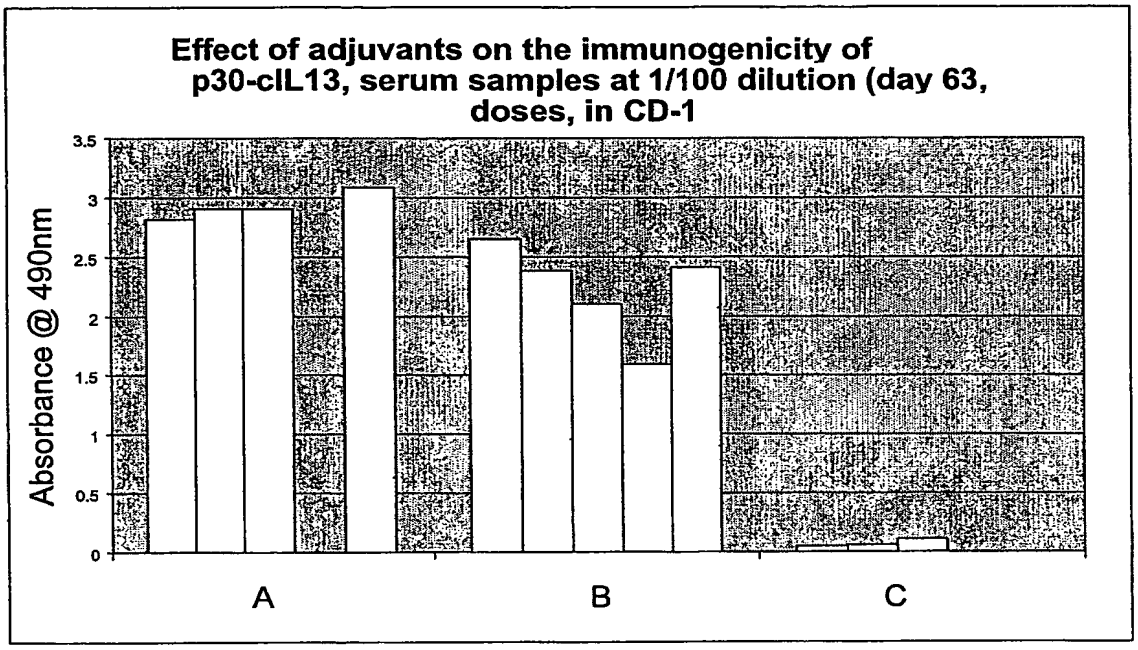


Figure34,

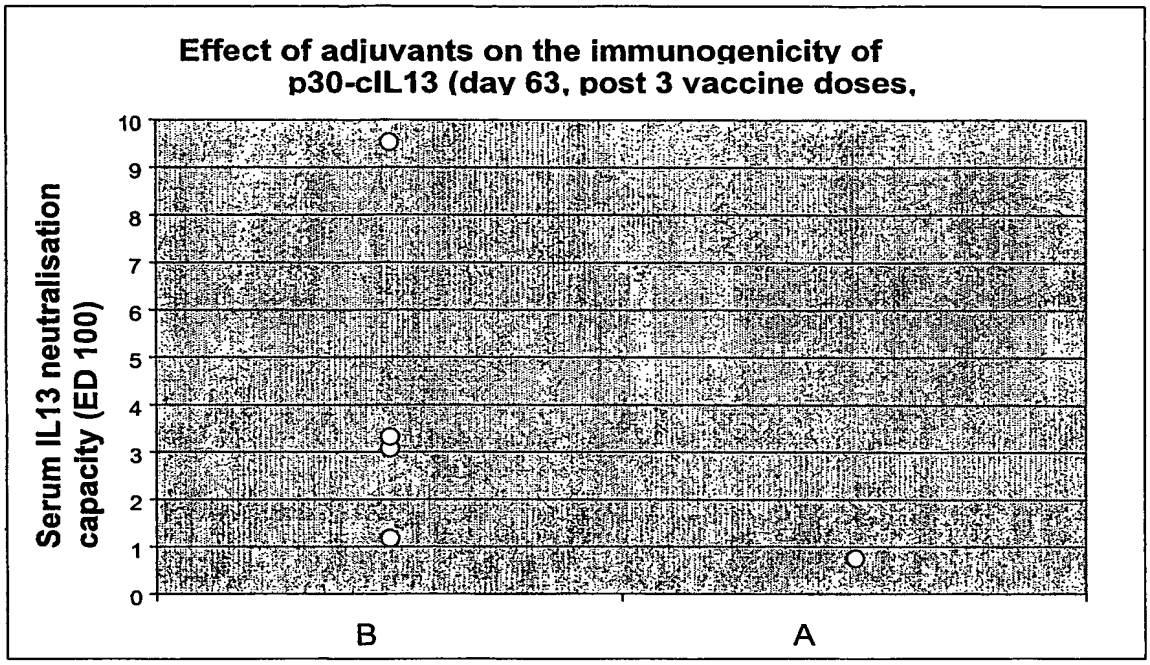


Figure 36,

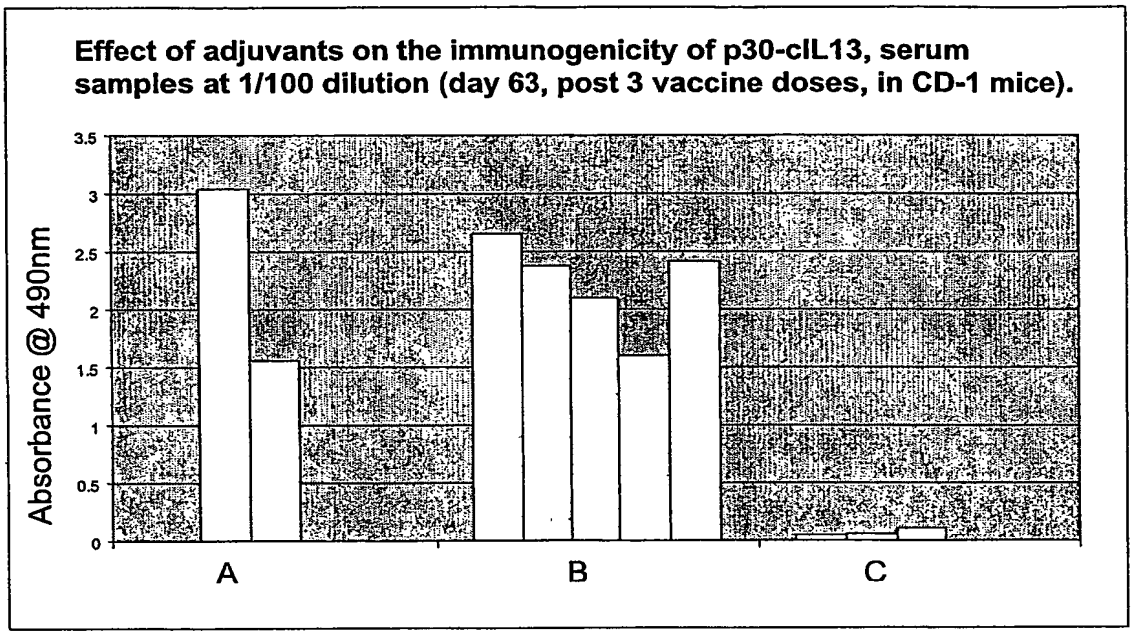
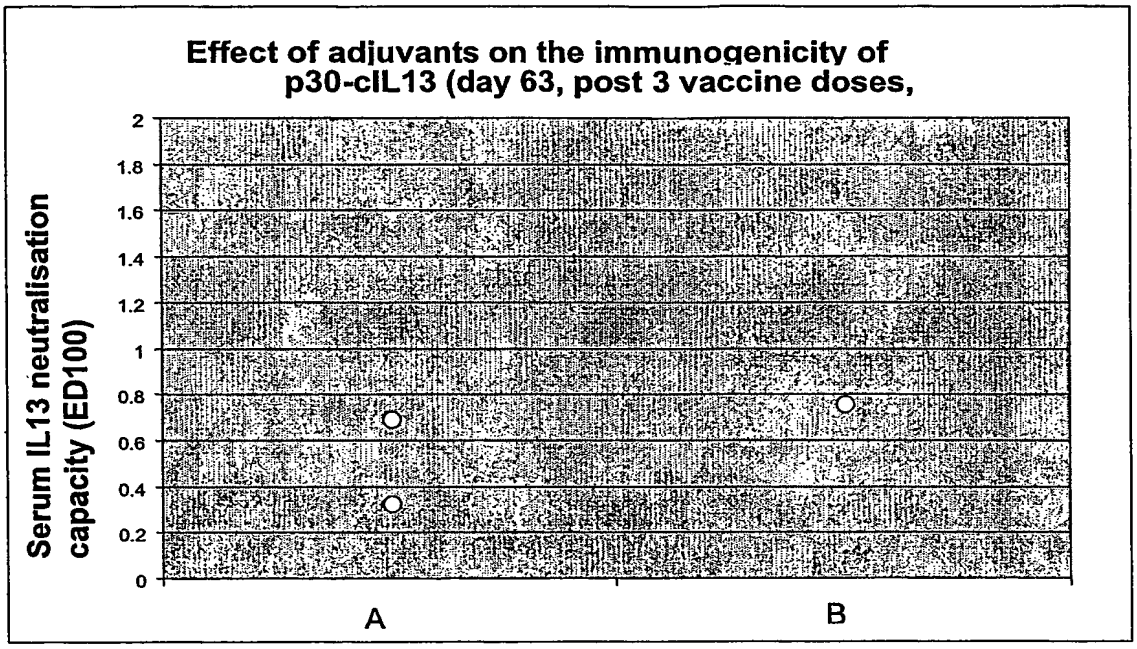


Figure 37,


Effect of adjuvants on the immunogenicity of p30-clL13 (day 63, post 3 vaccine doses,
Serum IL13 neutralisation capacity (ED100)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
A
B